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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,583	12/05/2005	Hyung-Pyo Yoon	0630-2354PUS1	4339
2292 7590 12/28/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER MOK, ALEX W	
			ART UNIT 2834	PAPER NUMBER
			NOTIFICATION DATE 12/28/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/539,583	Applicant(s) YOON, HYUNG-PYO	
	Examiner Alex W. Mok	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 is/are allowed.
- 6) ☒ Claim(s) 14-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/13/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/13/07 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 14-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. (US Application Publication No.: US 2002/0135264 A1), and further in view of Park (US Application Publication No.: US 2002/0105247 A1).

Song et al. discloses a reciprocating motor having an outer stator (reference numeral 10, see figure 5B) with a plurality of radially stacked first lamination sheets (reference numeral 11) around the bobbin (reference numeral 50, see figure 5A) in which a winding coil (reference numeral 30) is wound (see figure 5A, 5B); an inner stator (see figure 5B) disposed in the outer stator at a certain air gap from an inner

circumference of the outer stator, and having a plurality of radially stacked second lamination sheets (see figure 5B); a magnet paddle (reference numeral 40, see figure 5B) disposed between the outer stator and the inner stator, and having a plurality of magnets (reference numeral 41) installed at a circumference thereof (see figure 5B); and a terminal part (reference numeral 52) provided at one side of the outer stator for connecting an external power to the winding coil of the outer stator.

For claim 14, Song et al. differs from the claimed invention in that the motor is not taught to have a "magnetic force balancing part".

For claims 15 and 16, Song et al. differs from the claimed invention in that the "magnetic force balancing part" is not taught to have the same shape mentioned in claim 15, nor is it taught to have the same sectional area mentioned in claim 16, as the terminal part.

For claim 17, Song et al. differs from the claimed invention in that the "magnetic force balancing part" is not taught to be integrally formed with the bobbin.

Park, however, teaches a reciprocating motor having a plurality of unit stacked core members (each formed by a plurality of lamination sheets) that are separately positioned from each other around the outer circumference of the bobbin (see figure 4, and paragraph [0027]).

It would have been obvious to one of ordinary skill in the art to have the lamination sheets of the motor of Song et al. be separated, just as the core members are separated in the invention of Park, and thus forming the "magnetic force balancing part", which is inherently integrally formed with the bobbin (and inherently be the same

shape and sectional area as the terminal part), since such a technique would have logically commended itself to an inventor's attention in making the electromagnetic field formed between the inner and the outer stator of the motor uniform. Since the "magnetic force balancing part" would be the same shape and sectional area as the terminal part, this would essentially make the magnetic force balancing part protrude at the outer side of the bobbin as recited in claim 14, since the terminal part has the same configuration (see figures 5A, 5B of Song et al.).

Also, for claim 19, to have used the technique of disposing the "magnetic force balancing parts" at the same intervals on the basis of the terminal part on the circumference of the outer stator in the motor of Song et al. would have been obvious to one of ordinary skill in the art, since Park illustrates the unit stacked core members to be disposed at the same intervals around the outer circumference of the motor (see figures 4, 5, and 7).

For claims 18, 20, and 21, these intervals as mentioned above encompass the intervals of 180 degrees, 120 degrees, and 90 degrees, respectively.

For claims 22 and 25, since it would have been obvious to make the magnetic force balancing part the same shape and sectional area as the terminal part as explained for claims 15 and 16 above, this configuration would already make the magnetic force balancing part occupy the partial portion of the inner circumference of the bobbin such that the lamination sheets of the outer stator are disconnected to form a gap at the inner circumference of the bobbin (claim 22), i.e. the magnetic force

balancing part surrounds a partial portion of the bobbin and covers the inner circumference of the bobbin (claim 25).

For claims 23 and 24, since it would be obvious to have the magnetic force balancing parts disposed at the same intervals in a circumferential direction of the outer stator as in claim 19, this would essentially divide the lamination sheets of the outer stator into at least a first group and second group, with the groups being spaced apart by the gap occupied by the magnetic force balancing part (claim 23) or the gap occupied by the terminal part (claim 24). Having the first lamination sheets of the groups align along a diametric direction of the outer stator would be obvious to a person skilled in the art since this configuration would be ideal for the purposes of having a more uniform electromagnetic field.

Allowable Subject Matter

4. Claims 1-13 allowed.

The following is an examiner's statement of reasons for allowance: While prior art does teach some of the material in claim 1, it does not teach the combination comprising the outer stator having a plurality of radially stacked first lamination sheets around a bobbin in which the winding coil is wound, with each of the first lamination sheets being radial with respect to the center of the bobbin, the inner stator disposed in the outer stator at a certain air gap from the inner circumference of the outer stator, the inner stator having a plurality of radially stacked second lamination sheets, the magnet paddle disposed between the outer stator and the inner stator, and having a plurality of

magnets installed at a circumference thereof, the terminal part provided at one side of the outer stator for connecting the external power to the winding coil of the outer stator, and the magnetic force balancing part at which the first lamination sheets are not stacked, provided at the outer stator at the same interval on the basis of the terminal part in the circumferential direction of the outer stator.

Claims 2-13 are dependent upon claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

5. Applicant's arguments with respect to added claims 14-25 have been considered but they are not persuasive in view of the rejection as stated above in this action.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex W. Mok whose telephone number is (571) 272-9084. The examiner can normally be reached on 7:30-5:00 Eastern Time, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on (571) 272-2044. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alex W. Mok
Examiner
Art Unit 2834

AM

